National Aeronautics and
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# NAVIGATION BY THE STARS

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## NAVIGATION BY THE STARS

A thousand years ago, the Pacific islands were explored by Polynesian "wayfinders" who navigated by following the motions of the stars. Today, JPL's spacecraft use instruments called star trackers together with the Deep Space Network to find their way in deep space.

### WHAT YOU CAN DO:

Look up! Go outside and see what's up in the sky.

Learn how at

***iyacards.jpl.nasa.gov***

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# OBSERVING FROM THE GROUND

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## OBSERVING FROM THE GROUND

Galileo looked through his telescope 400 years ago to explore the Moon, Venus, and the moons of Jupiter. Today, many amateur astronomers use small telescopes to study planets, moons, stars, and galaxies.

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### WHAT YOU CAN DO:

Look through a small telescope at a planet or the Moon.

Learn how to find a star party at *iyacards.jpl.nasa.gov*

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# BIG TELESCOPES ON EARTH

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## BIG TELESCOPES ON EARTH

Observatories are building bigger and better telescopes to look deeper and deeper into the heavens. The twin Keck telescopes in Hawaii have tremendous mirrors to gather the faint light from faraway stars and galaxies.

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**WHAT YOU CAN DO:**

Visit an observatory or a planetarium.

Find out how at

***iyacards.jpl.nasa.gov***

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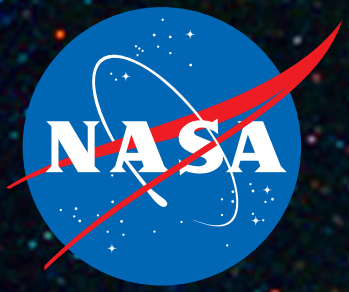
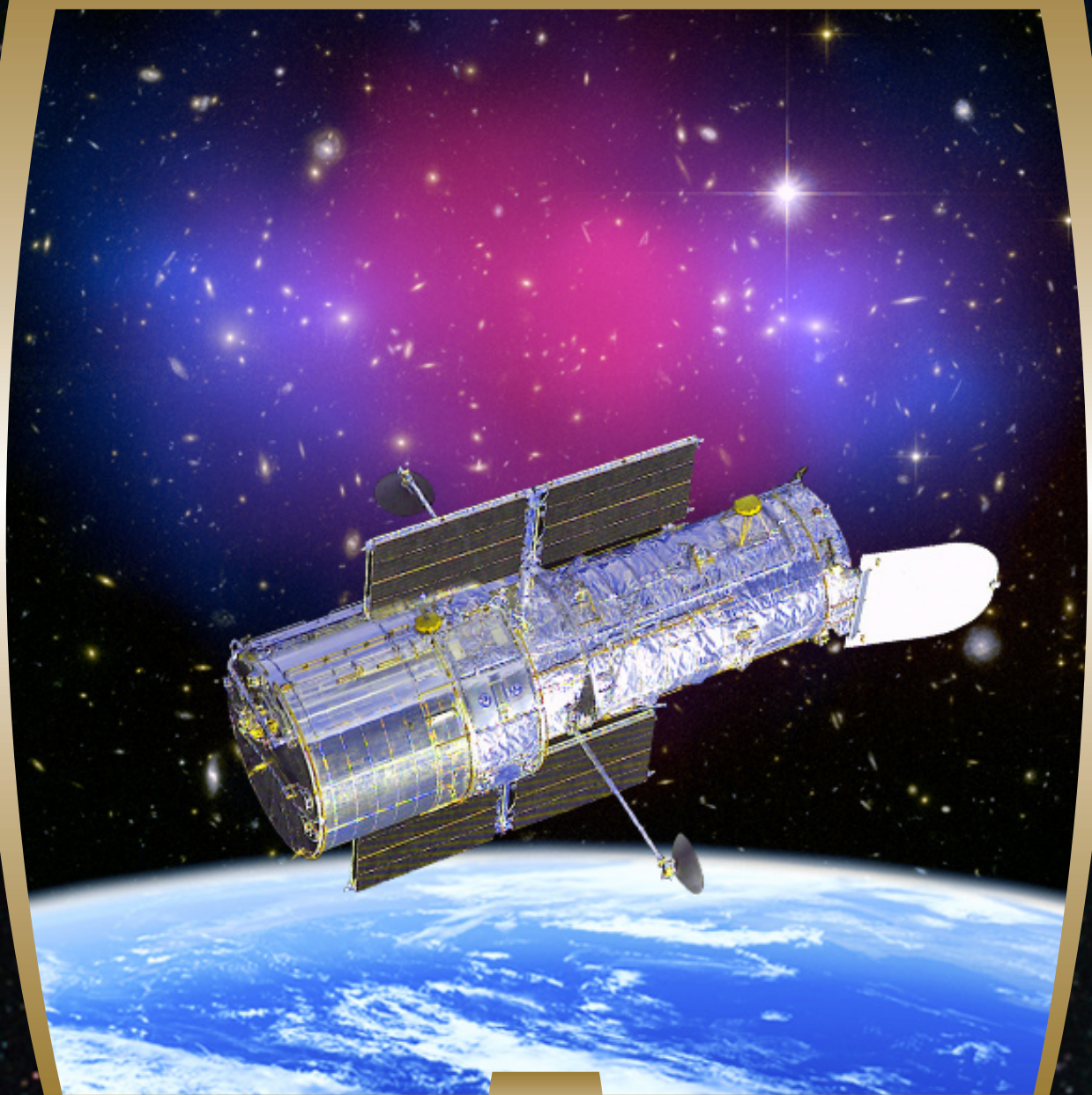



# VIEWS FROM SPACE



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## VIEWS FROM SPACE

Space telescopes get above Earth's atmosphere to see and photograph distant objects like stars and galaxies more clearly than telescopes on the ground can. Earth-studying satellites observe the entire planet from a global perspective.

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**WHAT YOU CAN DO:**

Get above the atmosphere and check out the views.

Learn how at

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# SOLAR SYSTEM EXPLORATION

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## SOLAR SYSTEM EXPLORATION

To discover things about the solar system that we can't see from Earth, JPL's robotic spacecraft — like the twin Mars Exploration Rovers — are sent to the other planets and moons to observe and interact with their surroundings using cameras and other sensors.

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**WHAT YOU CAN DO:**

Go explore other worlds.

Learn how at ***iyacards.jpl.nasa.gov***

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# BEYOND THE VISIBLE

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## BEYOND THE VISIBLE

Humans see what we call visible light, but instruments on board a spacecraft can see in other kinds of light. The Spitzer Space Telescope can look right through thick space dust and take pictures of stars and galaxies in infrared light.

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**WHAT YOU CAN DO:**

See the universe through different "eyes."

See how at ***iyacards.jpl.nasa.gov***

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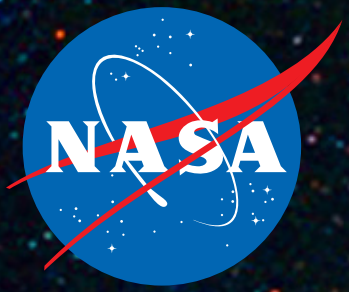


# COMMUNICATING WITH EARTH

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## COMMUNICATING WITH EARTH

A signal sent from a JPL spacecraft that has traveled to the outer solar system is like a whisper. Hearing such a faint signal is the job of the Deep Space Network, which uses large, very sensitive antennas that can point accurately towards the spacecraft.

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**WHAT YOU CAN DO:**

Try an experiment — listen like an antenna.

See how at ***iyacards.jpl.nasa.gov***

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